

Public Works Committee

5. 2.

Meeting Date: 03/21/2017

By: Bruce Westby, Engineering/Public Works

Title:

Consider Recommending Council Approval of City Cost Participation for Looped Watermain Connection through Brookfield 8th Addition

Purpose/Background:

Purpose:

The purpose of this case is to consider recommending City Council approval of City cost participation for a looped watermain connection through Brookfield 8th Addition.

Background:

Capstone Homes proposes to construct 25 single family homes along an approximately 1,200 foot long cul-de-sac street in Brookfield 8th Addition. This development is in the City's MUSA area and as such is proposed to be served by City water and sanitary sewer. The development plans submitted by Capstone Homes show the 8-inch diameter trunk watermain running through the cul-de-sac and dead-ending at the edge of the plat.

Engineering Staff's plan review comments directed the developer to extend the dead-end watermain line approximately 650 feet through an existing City owned right-of-way corridor to the south and to connect the extended watermain to an existing watermain stub north of 166th Avenue. This would provide a looped trunk watermain system which allows water to be drawn from either end of the trunk line which is preferred to dead-end watermain lines for numerous reasons, which are discussed in more detail below.

The developer responded that they can't afford to bear this cost alone, but that they understand the benefits and are agreeable to sharing up to 50% of the costs required to complete this work, to a maximum of \$50,000. The estimated cost to extend and connect the 8-inch trunk watermain line, including approximately 500 feet of directional drilled high-density polyethylene (HDPE) watermain and 150 feet of open trenched cast iron pipe (CIP), through the City owned right-of-way between 166th Avenue and Brookfield 8th Addition is approximately \$100,000. A 50/50 cost split would therefore result in both parties contributing up to \$50,000 for this work.

This watermain connection was discussed briefly by the City Council on February 28th. At the time, Council raised concerns that sharing in costs for directed work could set a precedent whereby future developers may request City cost sharing for watermain extensions and connections when requested by the City. However, Staff believes this situation is unique and would not set a precedent for future developer cost-share requests since the requested watermain extension occurs well outside the plat for Brookfield 8th Addition and therefore similar situations are anticipated to be encountered infrequently.

The trunk watermain connection will benefit both the City and the developer so City Staff supports a 50/50 cost-share based on dual benefits.

Benefits to the City due to a looped water supply system include;

1. Improved public safety response due to increased water pressure and flow rates
2. Improved water quality due to increased water pressure and flow rates
3. Ability to isolate (shut off) fewer homes when maintaining watermain
4. Reduced maintenance costs due to minimal watermain flushing needs

Benefits to Capstone Homes due to a looped water supply system include;

1. Ability to obtain Certificates of Occupancy one home at a time (versus obtaining multiple CO's for dead-end watermain)
2. Increased customer satisfaction due to City benefits #1 through #3

Attached is a one-page position sheet provided by Capstone Homes. As noted, if a cost-share agreement is not approved the developer proposes to install a dead-end watermain line. While this would not be ideal due to the potential concerns regarding water quality and public safety noted above, the dead-end 8-inch watermain line would be sufficient to serve the new homes along the cul-de-sac street once a sufficient number of homes are occupied and are using water. This number will depend on the locations of the homes along the dead-end main (to be determined by City Staff as needed).

Timeframe:

Staff estimates this case will take 15 minutes to present and respond to questions.

Observations/Alternatives:

Capstone Homes would complete the looped watermain connection work as part of their development, and the City would reimburse them for our share of the costs. City Staff will inspect the work and costs will be based on actual construction costs, which will be reviewed and approved by City Staff. Appropriate traffic control will be used as necessary while the work is completed.

Ben Minks with Capstone Homes will be attending to answer questions as needed.

Funding Source:

If a cost-share is approved by City Council, Staff will develop a cost-share agreement to be executed between the City and Capstone Homes. The City's share of costs will be funded through the Water Funds.

Recommendation:

Since the trunk watermain connection would benefit both the City and the developer, City Staff supports a 50/50 cost-share in an amount not-to-exceed \$50,000.

Action:

Recommend City Council approval of sharing in up to 50% of construction costs to connect the watermain from Brookfield 8th Addition to the existing trunk watermain at 166th Avenue at a not to exceed amount of \$50,000.

Attachments

Capstone Determination Memo

Form Review

Inbox	Reviewed By	Date
Grant Riemer	Grant Riemer	03/16/2017 09:45 AM
Kurt Ulrich	MaryJo Warner	03/16/2017 02:21 PM
Patrick Brama	Patrick Brama	03/16/2017 02:39 PM
Form Started By: Bruce Westby		Started On: 03/07/2017 08:04 AM
Final Approval Date: 03/16/2017		

5. COMMITTEE BUSINESS

5.01: Nominate Chair and Vice-Chair of the Public Works Committee

Motion by Councilmember Johns, seconded by Councilmember Kuzma, to recommend nomination of Chris Riley for Committee Chair and Mark Kuzma for Committee Vice Chair.

Motion carried. Voting Yes: Chairperson Riley, Councilmembers Johns and Kuzma. Voting No: None.

5.02: Consider Recommending Council Approval of City Cost Participation for Looped Watermain Connection through Brookfield 8th Addition

City Engineer Westby explained the Brookfield 8th Addition development includes a 1,200-foot-long cul-de-sac street that is proposed to be served by City water and sanitary sewer. The development plans, submitted by Capstone Homes, shows the 8" diameter watermain coming to a dead end at the edge of the plat. City Engineering staff have directed the developer to extend the dead-end watermain line to connect with an existing watermain stub north of 166th Avenue. The line would extend through a City-owned right-of-way to create a looped trunk watermain system, which provides numerous benefits. The line could be either trenched or drilled, at an overall cost of \$100,000. The developer has agreed to share up to 50% of the costs.

In terms of benefits, the looped watermain will improve public safety, enhance water pressure and water quality, and reduce maintenance costs. This unique situation will not set a precedent for future developers as the extension will not be within the plat for Brookfield 8th Addition. Capstone Homes would complete the connection as part of their development, and the City's share of costs will be covered under the Water Funds.

City Staff are requesting a recommendation to the City Council to approve connecting the watermain from Brookfield 8th Addition to the existing trunk watermain at 166th Avenue, at a not to exceed amount of \$50,000.

City Engineer Westby introduced Barry Onufrock, a representative of Capstone Homes. He added Mr. Onufrock was present to answer the Committee's questions and receive comments.

Councilmember Kuzma asked where the City's Water Funds come from.

City Engineer Westby stated the Water Funds are comprised of water trunk fees that are collected when new development occurs.

Councilmember Kuzma asked whether there is any future development anticipated to the south of this area.

City Engineer Westby stated no new development has been proposed.

Chairperson Riley asked whether City Staff supports the developer's estimated water usage calculations.

City Engineer Westby confirmed this, adding the developer calculated the volume of water in the pipe and the development's daily water requirements, and the totals are reasonable.

Councilmember Kuzma asked whether trenching or drilling is recommended for this project.

City Engineer Westby stated the developer is recommending drilling the line as there is less surface disturbance, and trenching will require additional de-watering costs.

Councilmember Johns asked whether the total project cost estimate is reasonable, and whether City staff expects any fluctuation.

City Engineer Westby stated this type of project has a defined cost with few potential changes, and the City's portion should not exceed \$50,000 in any case.

Chairperson Riley asked whether Mr. Onufrock had any comments.

Mr. Onufrock stated Capstone Homes plans to begin construction in Brookfield 8th Addition in the fall of 2017. He added the development's model homes can be built at the end of the cul-de-sac to alleviate concerns regarding water quality.

Chairperson Riley asked whether the looped watermain connection was a requirement for the plat development.

City Engineer Westby stated City Staff recommended the loop connection but the costs were prohibitive for the developer alone, and there are benefits for the City.

Motion by Councilmember Kuzma, seconded by Councilmember Johns, to recommend that the City Council approve City cost participation to connect the watermain from Brookfield 8th Addition to the existing trunk watermain at 166th Avenue at a not to exceed amount of \$50,000.

Motion carried. Voting Yes: Chairperson Riley, Councilmembers Kuzma and Johns. Voting No: None.

5.03: Review of Municipal Water System Control and Alarm Systems

Utilities Supervisor Nelson reviewed the City's SCADA (Supervisory Control and Data Acquisition) system and gave a demonstration of its capabilities. The SCADA computer program controls the City's water towers, municipal wells and sanitary sewer lift stations. The SCADA system allows City Staff to monitor infrastructure, determine cause when an alarm is triggered, and respond appropriately.